APPENDIX M

SIR MESSAGE EXAMPLE

Background

This hypothetical example is included to show the process of taking evidence discovered in the course of the mishap investigation to compose paragraphs 1 and 10 through 13 of the SIR. It is, by definition, hypothetical and brief; but the principle is the same as for an actual SIR.

The purpose of the SIR is to fix the causes of the mishap, the CAUSE FACTORS. Each CAUSE FACTOR has three ELEMENTS associated with it, not unlike the subject/verb/object of a sentence, which precisely describe the personnel, equipment, actions/events, and reasons for the mishap. Determining these ELEMENTS determines the CAUSE FACTOR; this identifies the starting point for remedial action. The prescribed form for composing the SIR allows the AMB to develop its analysis and conclusions in its own language and state them as accepted or rejected CAUSE FACTORS. Each accepted causal factor is then matched to the standardized, but more abstract terminology required for DETAILED CAUSE FACTORS, which are required for efficient analysis by the COMNAVSAFECEN. Accepted causal factors are stated in the analysis and conclusions paragraph. The plain language allows for readability within the SIR and the standardized format ensures that the determined causes of the mishap are stated with precision and without ambiguity. This example shows how this is done.

Scenario: GEAR-UP LANDING

A multi-piloted aircraft joined the landing pattern. The aircrew consisted of pilot (aircraft commander), and copilot (pilot qualified in model). The copilot, a nugget recently reported, read the landing checklist and the pilot, a seasoned veteran of intimidating demeanor, executed it. The pilot put the landing gear handle in the down position but did not check the gear position indicators. These showed the gear up, and neither pilot noticed the gear handle warning light which was illuminated. The gear was, in fact, up. The aircraft was equipped with a horn which sounded when the throttle was retarded to a descent setting and the landing gear was up. The horn failed to sound when the pilot retarded the throttle at the 180. The aircraft landed gear-up, slid off the runway and crashed into a maintenance truck parked on the grass. The

aircraft suffered Class "B" damage with substantial damage to the truck. There were no injuries.

The following facts were discovered in the investigation: the pilot had only 4 hours sleep the previous night after working late; the pilot's father had died the month before; earlier maintenance on the landing gear had been in accordance with directives but the maintenance handbook omitted a procedural step which allowed the gear handle to be moved without lowering the gear; emergency gear extension was available but not used; a microswitch in the throttle quadrant corroded and failed as an open circuit, defeating the gear-up warning horn; the climate at homebase was wet and rainy; the aircraft was usually parked on the flight line. The mishap crew had not had aircrew coordination training, and most squadron pilots had lapsed ACT currency. Personnel repairing taxi lights parked a truck on grass beside the runway with permission of tower.

Paragraph 1, Mishap Info: the following example shows the composition of paragraph 1.A and 1.B.

RMKS/1. MISHAP INFO:
A. THIS REPORT CONCERNS A SEVERE HAZARD TO NAVAL AVIATION. COMMANDING OFFICER SQUADRON ONE TWO THREE ENDORSEMENT REQUESTED IAW REF (A). SUMMARY: DURING DAY VFR TRAINING FLIGHT, AIRCRAFT LANDED GEAR UP, SLID OFF RUNWAY AND STRUCK MAINTENANCE TRUCK PARKED BESIDE RUNWAY.
B. PRIVILEGED MISHAP NARRATIVE. IN LANDING PATTERN FOR RUNWAY 27, MISHAP PILOT (MP) (AIRCRAFT COMMANDER) CALLED FOR LANDING CHECKLIST AND REPLIED TO EACH ITEM AS MISHAP COPILOT (MCP) (PQM) READ THEM. MP PUT LANDING GEAR HANDLE IN DOWN POSITION BUT DID NOT CHECK GEAR POSITION INDICATORS WHICH SHOWED GEAR STILL UP. NEITHER PILOT NOTICED GEAR HANDLE WARNING LIGHT ILLUMINATED. WHEN THROTTLE WAS RETARDED FOR DESCENT FROM 180-DEGREE POSITION, WARNING HORN FOR GEAR UP WITH REDUCED POWER DID NOT SOUND. MA LANDED GEAR UP, SLID RIGHT AND STRUCK A TRUCK PARKED BESIDE RUNWAY. TOWER PERSONNEL HAD CLEARED THE DRIVER TO PERFORM MAINTENANCE TAXI LIGHTS IN THE ACTIVE RUNWAY, CONTRARY TO STATION PROCEDURES. MP HAD WORKED LATE THE NIGHT BEFORE THE MISHAP AND SLEPT ONLY 4 HOURS. MAINTENANCE ON LANDING GEAR BEFORE FLIGHT WAS PERFORMED IN ACCORDANCE WITH DIRECTIVES BUT A SIGNIFICANT STEP WAS OMITTED FROM MAINTENANCE MANUAL. MISSED MAINTENANCE ACTION ALLOWED LANDING GEAR HANDLE TO BE SELECTED TO DOWN WITHOUT ACTUALLY LOWERING THE GEAR. MICROSWITCH IN THROTTLE QUADRANT CORRODED AND FAILED AS AN OPEN CIRCUIT. OPEN CIRCUIT DEFEATED WARNING HORN WHEN THROTTLE WAS RETARDED WITH LANDING GEAR UP.

Paragraphs 2 through 9 are repeated from the MDR to include any new nonprivileged information that has been provided in previous MDRs.

Paragraph 10, Evidence: the following example shows the composition of paragraph 10 from the above evidence.

10. EVIDENCE.

A. ENCLOSURES HAVE BEEN MAILED PER REF A.
(1A) (Unit ID & msg DTG), FINAL MDR
(2A) SIR ENCLOSURE FORMS (Appendix N, as required)
(A) FORM 1, GENERAL INFORMATION
(B) FORM 2, INDIVIDUAL BACKGROUND DATA, PILOT
(C) FORM 2, INDIVIDUAL BACKGROUND DATA, COPILOT
(D) FORM 4, AVIATION PHYSIOLOGY, PILOT
(E) FORM 4, AVIATION PHYSIOLOGY, COPILOT
(F) FORM 6, ESCAPE-EGRESS DATA, PILOT
(G) FORM 6, ESCAPE-EGRESS DATA, COPILOT
(H) FORM 9, AIRCREW DATA
(I) FORM 10, AIRCRAFT DATA
(J) FORM 11, IMPACT DATA
(K) FORM 13, METEOROLOGICAL DATA
(3A) (non-privileged witness statements)(List those witnesses who were not given a promise of confidentiality)
(A) Statement of maintenance truck driver
(B) Mr. John Doe
(4A) (Subsequent non-privileged enclosure such as the page in error from maintenance handbook.)
(5A) etc.
The following privileged enclosures would be as a minimum with this SIR:
(1B) (Unit ID & msg DTG) SIR MESSAGE
(2B) AEROMEDICAL ANALYSIS
(3B) MP STATEMENT
(4B) MCP STATEMENT
(5B) SUMMARY OF INTERVIEWS WITH MAINTENANCE CREW
B. SUMMARY OF EVIDENCE.
(1) THE FOLLOWING ACRONYMS, ABBREVIATIONS AND DEFINITIONS ARE USED IN THIS SIR:
(A) MA - MISHAP AIRCRAFT
(B) MP - MISHAP PILOT
(C) MCP - MISHAP COPILOT
(D) ACT - AIRCREW COORDINATION TRAINING

(P)(2) THE PILOT SLEPT FOUR HOURS THE NIGHT BEFORE THE MISHAP. HE STATED HE USUALLY SLEEPS EIGHT HOURS AND WAS TIRED THE DAY OF THE MISHAP.

(P)(3) THE PILOT AND COPILOT WENT THOUGH THE LANDING CHECKLIST IN PERFUNCTORY FASHION, EACH FAILING TO CHECK FOR WHEELS DOWN INDICATION. AN INEXPERIENCED COPILOT WAS SCHEDULED WITH THE MOST EXPERIENCED PILOT IN THE SQUADRON. THE COPILOT RELIED ON THE PILOT'S EXPERIENCE AND DID NOT VERIFY OR QUESTION THE PILOT'S ACTIONS.

(P)(4) THE PILOT'S FATHER HAD DIED THE MONTH BEFORE THE MISHAP.

(5) THE MAINTENANCE PERFORMED ON THE AIRCRAFT WAS IN ACCORDANCE WITH THE HANDBOOK.

(6) THE MAINTENANCE HANDBOOK LEAVES OUT AN IMPORTANT STEP (4A).

(7) AN AIRFIELD MAINTENANCE MAN FIXING TAXI LIGHTS PARKED HIS TRUCK NEXT TO RUNWAY 27 WITH TOWER PERMISSION (3A)

(8) THE MICROSWITCH IN THE THROTTLE QUADRANT WHICH SENSES THROTTLE POSITION AND ACTIVATES THE GEAR WARNING HORN WAS CORRODED AND FAILED TO AN OPEN CIRCUIT (FALSE SAFE INPUT TO WARNING SYSTEM).

Paragraph 11, Analysis: here the AMB shares what it considers to be the significance of the evidence. The hazards that are suggested by the evidence are tested for plausibility and ACCEPTED or REJECTED. To emphasize the significance of human factors and to bring these out of the shadow of what was previously titled the Flight Surgeon's Report, all aeromedical conditions are required to be discussed in this paragraph. Those that are ACCEPTED will go on to be listed in the conclusions and recommendations paragraphs; those that are REJECTED, but present and not contributing, will be further discussed in the AEROMEDICAL ANALYSIS enclosure ((2B) in this example). After each accepted cause factor, the detailed case factor elements from appendix L will be selected and placed at the end.

11. ANALYSIS.

A. AIRCREW FACTOR - PILOT OVERLOOKED THE GEAR UP INDICATION BECAUSE HE WAS FATIGUED. ACCEPTED. PILOT DID NOT RECALL LOOKING AT THE GEAR INDICATION BEFORE REPORTING THEM DOWN. HE RESTED HALF AS LONG AS USUAL THE NIGHT BEFORE THE MISHAP AND FELT TIRED DURING THE FLIGHT. FATIGUE IS MOST PLAUSIBLE REASON FOR HIM TO DEPART FROM HIS HABIT PATTERN AND OVERLOOK THE GEAR INDICATIONS SHOWING GEAR UP. BASED ON THE ABOVE ANALYSIS THE AMB CONCLUDES THE MISHAP PILOT FAILED TO

CHECK THE LANDING GEAR INDICATION ON FINAL BECAUSE HE WAS FATIGUED.
WHO: AIRCREW, PILOT AT CONTROLS, AIRCRAFT COMMANDER.
WHAT: FAILED TO EXTEND LANDING GEAR, UNINTENTIONAL, FAILED TO CONFIRM LANDING GEAR POSITION PRIOR TO LANDING.
WHY: PHYSIOLOGICAL, ACUTE EFFECTS, FATIGUE, INADEQUATE REST.

B. AIRCREW FACTOR - PILOT AND COPILOT WENT THOUGH THE LANDING CHECKLIST IN PERFUNCTORY FASHION, FAILING TO CHECK GEAR POSITION INDICATORS. ACCEPTED. A GREEN COPILOT ACCEPTED THE VETERAN PILOT'S READBACK OF THE CHECKLIST WITHOUT QUESTIONING OR VERIFYING BECAUSE OF HIS OVER-CONFIDENCE IN PILOT'S EXPERIENCE. BASED ON THE ABOVE ANALYSIS THE AMB CONCLUDES THAT MISHAP PILOT AND MISHAP COPILOT ACTED IN UNCOORDINATED MANNER BY NOT INDEPENDENTLY VERIFYING SIGNIFICANT STEPS IN LANDING CHECKLIST.
WHO: AIRCREW, COPILOT NOT AT CONTROLS, PILOT QUALIFIED IN MODEL.
WHAT: FAILURE OF AIRCREW COORDINATION, FAILURE TO BACKUP PILOT IN COMMAND.
WHY: INADEQUATE COORDINATION, IMBALANCE IN TRANSCOCKPIT AUTHORITY GRADIENT.

C. AIRCREW FACTOR - PILOT OVERLOOKED THE GEAR UP INDICATION BECAUSE HE WAS PREOCCUPIED BY THE RECENT DEATH OF HIS FATHER. REJECTED. PILOT HAD RETURNED FROM EMERGENCY LEAVE AND REINTEGRATED INTO SQUADRON ROUTINE WITHOUT INCIDENT.

(Note: Details of pilot's reaction to father's death are omitted in this section and included in the aeromedical analysis.)

D. MAINTENANCE FACTOR - MAINTENANCE PERSONNEL DID NOT FOLLOW PROCEDURE, RESULTING IN IMPROPER RIGGING OF LANDING GEAR. REJECTED. REVIEW OF PUBLICATIONS, MAINTENANCE AND QUALITY ASSURANCE PROCEDURES, WORK DOCUMENTATION AND INTERVIEWS WITH MAINTENANCE AND QA PERSONNEL SUPPORT A FINDING THAT WORK ACCOMPLISHED WAS IN ACCORDANCE WITH PROCEDURES AS PUBLISHED.

E. SUPERVISORY FACTOR - MAINTENANCE HANDBOOK OMITS IMPORTANT STEP IN LANDING GEAR MAINTENANCE PROCEDURE ALLOWING IMPROPER RIGGING OF LANDING GEAR. ACCEPTED. REVIEW OF HANDBOOK AND INTERVIEW WITH MANUFACTURER'S REPRESENTATIVE SHOWED A STEP WAS OMITTED, WHICH RESULTED IN MISRIGGING AND ALLOWED THE GEAR HANDLE TO MOVE TO THE DOWN POSITION WITHOUT INITIATING THE LOWERING SEQUENCE. BASED ON THE ABOVE ANALYSIS THE AMB CONCLUDES THE MAINTENANCE HANDBOOK OMITS AN IMPORTANT STEP IN LANDING GEAR MAINTENANCE PROCEDURE ALLOWING IMPROPER RIGGING OF LANDING GEAR.
WHO: SUPERVISORY, MATERIAL COMMAND, COMNAVAIRSYSCOM.
WHAT: PROVIDED IMPROPER TECHNICAL PROCEDURE.

WHY: PERFORMANCE, OTHER - INADVERTENT OMISSION.

F. SUPERVISORY FACTOR - UNIT COMMANDER FAILED PROVIDE ESSENTIAL TRAINING. ACCEPTED. MISHAP CREW HAD NOT ATTENDED ACT; MOST REMAINING SQDN AIRCREWS HAD LAPSED ACT CURRENCY SINCE JOINING THIS COMMAND. ONI 3710.7Q REQUIRES ACT ANNUALLY. THE TRAINING ADDRESSES CREW BACKUP IN CRITICAL AREAS SUCH CHECKLIST EXECUTION. BASED ON THE ABOVE ANALYSIS THE AMB CONCLUDES THE UNIT COMMANDER FAILED TO PROVIDE ESSENTIAL TRAINING.
WHO: SUPERVISORY, SQUADRON, COMMANDING OFFICER
WHAT: FAILURE TO PROVIDE, TRAINING QUALIFICATION
WHY: PERFORMANCE, JUDGEMENT ERROR, POOR DECISION, DELAYED DECISION

G. MATERIAL FACTOR - THROTTLE QUADRANT MICROSWITCH MALFUNCTIONED DUE TO CORROSION. ACCEPTED. TRACING COMPONENTS FOR GEAR SELECTION AND POSITION INDICATION LEAD TO A SWITCH WHICH SENSES THROTTLES POSITION AND ENABLES THE WARNING HORN FOR GEAR UP WHEN THROTTLES ARE PULLED BACK. THE SWITCH APPEARED CORRODED AND WAS FOUND IN A POSITION CORRESPONDING TO AN OPEN-CIRCUIT (NO WARNING). LABORATORY EXAMINATION IDENTIFIED CORROSION DUE TO AMBIENT ATMOSPHERIC MOISTURE IN NORMAL SERVICE. BASED ON THE ABOVE ANALYSIS THE AMB CONCLUDES THE THROTTLE QUADRANT MICROSWITCH FAILED DUE TO CORROSION.
COMP: LANDING GEAR WARNING SYSTEM, THROTTLE QUADRANT MICROSWITCH.
MODE: OPEN CIRCUIT.
AGENT: CORROSION OF COMPONENT.

H. FACILITIES PERSONNEL - TOWER PERSONNEL VIOLATED AIR STATION PROCEDURES IN PERMITTING MAINTENANCE VEHICLE ALONGSIDE ACTIVE RUNWAY. ACCEPTED. TOWER PERSONNEL CLEARED MAINTENANCE VEHICLE AND OCCUPANT TO REPAIR TAXI LIGHTS ON THE ACTIVE RUNWAY. STATION PROCEDURES REQUIRE RUNWAY BE CLOSED UNTIL THE WORK IS FINISHED AND VEHICLES LEAVE THE AREA. TOWER PERSONNEL FORGOT ABOUT REQUIREMENT AND CLEARED TRUCK TO PARK ALONGSIDE ACTIVE RUNWAY FOR FIELD MAINTENANCE. MISHAP AIRCRAFT STRUCK TRUCK AFTER SKIDDING OFF RUNWAY. BASED ON THE ABOVE ANALYSIS THE AMB CONCLUDES TOWER PERSONNEL VIOLATED PROCEDURE IN PERMITTING MAINTENANCE VEHICLE IN PROXIMITY OF ACTIVE RUNWAY.
WHO: FACILITIES PERSONNEL, TOWER PERSONNEL.
WHAT: FACILITIES PERSONNEL, FAILED TO ADHERE TO PROCEDURES, STANDARD OPERATING PROCEDURES.
WHY: JUDGEMENT ERROR, INADEQUATE RISK ASSESSMENT.

Paragraph 12, Conclusions: The AMB arrives at its conclusions by consensus with no one member having veto power. This consensus is actually achieved and stated in the analysis process/paragraph for what the AMB considers <u>are</u> and <u>are not</u> the causes of the mishap.

Paragraph 12 restates this consensus for the FACTORS that are considered the cause(s) and then assigns a risk assessment code (RAC) to establish a quantitative measure of the safety impact of the identified hazard. Assigned corrective actions are referenced as well. The format of paragraph 12 is structured to ensure there is no ambiguity in the AMB's statement of its conclusions. The AMB's conclusions are separated into two groups: factors "CAUSING THE MISHAP", and factors causing "OTHER DAMAGE OR INJURY". The plain language conclusions of the AMB are the causal factors and appear in the subparagraphs of each section. Preceding them is the determination statement which establishes the degree of confidence which the AMB has in its conclusions. There are five, standard phrases to do this, one of which must be used. These are described in detail in chapters 6 and 7. In this example, the cause of the mishap has been "determined"; i.e., evidence for a plausible mishap scenario has been established with confidence and competing scenarios have been eliminated, also with confidence. Then the CAUSE FACTORS and assigned RACs are enumerated. The first part of the description of each CAUSE FACTOR is its classification; e.g., AIRCREW FACTOR. A dash follows and then a short sentence or phrase describing the FACTOR. A verbatim repetition or paraphrase of the analysis paragraph for the factor up to where the factor is accepted, followed by the RAC is sufficient. All factors that are accepted in the analysis section must appear in the Conclusions section. Finally, the statement "ASSOCIATED RECOMMENDATIONS:" is made, followed by a listing of the numbers of associated recommendations.

12. CONCLUSIONS.

A. CAUSAL FACTORS OF THE MISHAP:

(1) THE CAUSAL FACTORS OF THIS MISHAP ARE DETERMINED TO BE:

(A) AIRCREW FACTOR - PILOT OVERLOOKED THE GEAR UP INDICATION BECAUSE HE WAS FATIGUED. RAC 2. ASSOCIATED RECOMMENDATIONS: 13.A.(1)(A); 13.A.(1)(B).

(B) AIRCREW FACTOR - PILOT AND COPILOT PERFORMED LANDING CHECKLIST WITHOUT CHECKING GEAR POSITION INDICATORS. RAC 2. ASSOCIATED RECOMMENDATIONS: 13.A.(1)(C).

(C) SUPERVISORY FACTOR - MAINTENANCE HANDBOOK OMITS IMPORTANT STEP IN LANDING GEAR MAINTENANCE PROCEDURE ALLOWING IMPROPER RIGGING OF LANDING GEAR. RAC 4. ASSOCIATED RECOMMENDATIONS: 13.A.(2)(A).

(D) SUPERVISORY FACTOR - UNIT COMMANDER FAILED TO IMPLEMENT REQUIRED ACT FOR SQDN AIRCREWS. RAC 2. ASSOCIATED RECROMMENDATIONS: 13.A.(1)(C).

(E) MATERIAL FACTOR - THROTTLE QUADRANT MICROSWITCH MALFUNCTIONED DUE TO CORROSION. RAC 4. ASSOCIATED RECOMMENDATIONS: 13.A.(2)(B).

B. CAUSAL FACTORS CAUSING OTHER DAMAGE AND INJURY:

(1) THE CAUSAL FACTOR OF OTHER DAMAGE OR INJURY IS DETERMINED TO BE:

(A) FACILITIES PERSONNEL - TOWER PERSONNEL CLEARED A VEHICLE IN PROXIMITY OF ACTIVE RUNWAY, VIOLATING STATION PROCEDURE. RAC 4. ASSOCIATED RECOMMENDATIONS: 13.B.(1)(A).

C. ORM ASSESSMENT:

(1) HAZARD - AIRCREW READINESS.

(A) CONTROL – SQUADRON OPS ENSURE AIRCREW IS QUALIFIED FOR SCHEDULED MISSION IN COMPLIANCE WITH FLIGHT SYLLABUS AND SQUADRON, TYPEWING/TYCOM, AND NATOPS INSTRUCTIONS AND SOP'S.

(B) CONTROL - AIRCREW COMPLY WITH OPNAVINST 3710.7R AND SQUADRON SOP ON CREW REST AND SLEEP REQUIREMENTS.

(C) CONTROL - SDO ENSURE AIRCREW COMPLETE SQUADRON RISK ASSESSMENT WORKSHEET (RAW) DURING PREFLIGHT PLANNING/BRIEF AND RECOMMEND FLIGHT SCHEDULE ADJUSTMENTS TO CO AS NECESSARY.

(D) CONTROL – SQUADRON CO ENSURE HUMAN FACTORS COUNCILS ARE CONDUCTED AS REQUIRED.

(2) HAZARD – AIRCREW COORDINATION ERRORS.

(A) CONTROL – SQUADRON OPS ENSURE COMPLIANCE WITH OPNAVINST 1542.7B AIRCREW COORDINATION TRAINING REQUIREMENTS FOR ALL AIRCREW.

(B) CONTROL – AIRCREW COMPLY WITH NATOPS CREW COORDINATION AND MISSION BRIEF REQUIREMENTS PRIOR TO FLIGHT.

(3) HAZARD – LANDING GEAR MALFUNCTIONS.

(A) CONTROL – AIRCREW AND MAINTENANCE CONTROL SUPERVISORS REVIEW AIRCRAFT DISCREPANCY BOOK AND ENSURE NO OUTSTANDING DISCREPANCIES ON LANDING GEAR COMPONENTS OR INDICATING SYSTEMS PRIOR TO RELEASING OR ACCEPTING AIRCRAFT FOR FLIGHT.

(B) CONTROL - PILOTS COMPLY WITH NATOPS LANDING CHECKLIST AND SQUADRON SOP REQUIRING BOTH PILOTS VISUALLY VERIFY COCKPIT LANDING GEAR INDICATORS REFLECT GEAR DOWN AND LOCKED PRIOR TO EACH LANDING.

(C) CONTROL – NAVAIRSYSCOM ENSURE MIM'S PROCEDURES ARE VALIDATED FOR ACCURACY PRIOR TO ISSUE FOR USE BY FLEET SQUADRONS.

(D) CONTROL – SQUADRON MAINTENANCE/QA CREWS ENSURE APPLICABLE PROCEDURES FROM NAMP AND MIM'S ARE FOLLOWED FOR LANDING GEAR MAINTENANCE.

(E) CONTROL – AIRCREW COMPLY WITH NATOPS EMERGENCY PROCEDURES FOR LANDING GEAR MALFUNCTIONS.

(4) HAZARD – LANDING AREA OBSTRUCTIONS.

(A) CONTROL - AIRFIELD OPS/ATC CREWS COMPLY WITH CO NAS SOP ARTICLE PROCEDURES FOR AUTHORIZING MAINTENANCE OR OBSTRUCTIONS TO AIRFIELD RUNWAY AREAS.

(B) CONTROL – AIRFIELD OPS CREWS COMPLY WITH APPLICABLE FACILITY INSTRUCTIONS FOR CONDUCTING AIRFIELD SYSTEMS OPERATIONS CHECKS AND VISUAL INSPECTION/FOD WALKDOWNS OF RUNWAY ENVIRONMENTS.

(C) CONTROL – AIRFIELD OPS/ATC CREWS COORDINATE AND SCHEDULE REQUIRED AIRFIELD MAINTENANCE AND ISSUE NOTAM'S/MODIFY AIRFIELD OPERATIONS AS REQUIRED.

Paragraph 13, Recommendations: The format for the Recommendations paragraph shall be similar to the Conclusions paragraph and separated into the same two groups identified in paragraph 12. All corrective actions should fix WHY's or AGENT's of each CAUSAL factor to be most effective.

13. RECOMMENDATIONS.

A. CAUSAL FACTORS OF THE MISHAP:

(1) UNIT CO:

(A) CONDUCT QUARTERLY REFRESHER TRAINING FOR AIRCREW ON EFFECTS OF FATIGUE. IMPLEMENT WITHIN 30 DAYS. HAS BEEN INCLUDED IN SQDN TRAINING SOP. CLOSED.

(B) DECLARE POLICY ON SELF-REMOVAL FROM FLIGHT SCHEDULE AND POST IN SCHEDULES OFFICE. IMPLEMENT WITHIN ONE WEEK. COMPLETE. CLOSED.

(C) SCHEDULE ALL AIRCREWS TO ACT. IMPLEMENT WITHIN 30 DAYS. TRAINING IN PROGRESS; INCLUDED IN TRAINING SOP. CLOSED.

(2) COMNAVAIRSYSCOM:

(A) CORRECT MAINTENANCE HANDBOOK. CHANGE MADE BY MESSAGE: XXXXXXXXZ JAN 99. CLOSED.

(B) REPLACE THROTTLE QUADRANT MICROSWITCH WITH CORROSION RESISTANT COMPONENT FOR EACH AIRCRAFT AT NEXT OVERHAUL. IMPLEMENT WITHIN ONE YEAR. OPEN.

B. CAUSAL FACTOR OF OTHER DAMAGE AND INJURY:

(1) AIR STATION CO:

(A) CONDUCT REFRESHER TRAINING FOR ON SOP CONCERNING VEHICLES ON OR NEAR ACTIVE RUNWAYS. IMPLEMENT WITHIN 30 DAYS. OPEN.